

METHOD AND SYSTEM FOR ON-SITE GENERATION  
AND DISTRIBUTION OF A PROCESS GAS

ABSTRACT OF THE INVENTION.

[00100] A system and method for on-site generation and distribution of a process gas are disclose, one embodiment of the system comprising a process gas generation cabinet, wherein the process gas generation cabinet comprises a housing, encompassing a process gas generator, and an exhaust and abatement system. The cabinet housing can further comprise one or more input vents to direct air to the process gas generator; a normal exhaust output port; and, an emergency exhaust output port. The exhaust and abatement system can further comprise an exhaust channel; a normal operating channel coupled to the normal exhaust output port and the exhaust channel, wherein the normal operating channel further comprises a normal operating valve; an emergency channel coupled to the emergency exhaust output port of the cabinet housing and to the exhaust channel, wherein the emergency channel further comprises an emergency exhaust valve and an absorbent packed material; and a process gas sensor located upstream from the normal operating valve, wherein the process gas sensor is operable to close the normal operating valve and open the emergency exhaust valve if process gas levels in the cabinet housing exceed a preset level. The process gas can be, for example, fluorine.